

### **REMARKS**

This communication responds to the Office Action mailed on December 31, 2007. Claims 1, 5, 7, 10, 12, 15, 20-21 and 24 are amended, claims 4, 19 and 23 are canceled, and no claims are added. As a result, claims 1-3, 5-18, 20-22 and 24 are now pending in this application.

#### **Objections to the Claims**

An objection was raised to claim 12 based on informalities. Applicant has amended claim 12 by changing the clause “the switching power amplifier is selected from a class D amplifier, a class E amplifier, and a class S amplifier” to read: “the switching power amplifier is selected from a group consisting of a class D amplifier, a class E amplifier, and a class S amplifier”, and thus believes that this amendment overcomes the objection of claim 12. Reconsideration is respectfully requested.

#### **§102 Rejection of the Claims**

Claims 1, 2, 7, 8, 10, 12, 15 and 16 were rejected under 35 USC § 102(e) as being anticipated by Karki et al. (U.S. 6,454,533, hereinafter “Karki”). Applicant does not admit that Karki is prior art and reserves the right to swear behind this reference at a later date. In addition, because the office has not established a *prima facie* case of anticipation with respect to the amended claims, this rejection is respectfully traversed.

Anticipation under 35 USC § 102 requires the disclosure in a single prior art reference of each element of the claim under consideration. *See Verdegaal Bros. V. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ 2d 1051, 1053 (Fed. Cir. 1987). It is not enough, however, that the prior art reference discloses all the claimed elements in isolation. Rather, “[a]nticipation requires the presence in a single prior reference disclosure of each and every element of the claimed invention, *arranged as in the claim.*” *Lindemann Maschinenfabrik GmbH v. American Hoist & Derrick Co.*, 730 F.2d 1452, 221 USPQ 481, 485 (Fed. Cir. 1984) (citing *Connell v. Sears, Roebuck & Co.*, 722 F.2d 1542, 220 USPQ 193 (Fed. Cir. 1983)) (emphasis added). “The *identical invention* must be shown in as complete detail as is contained in the ...

claim.” *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989); MPEP § 2131 (emphasis added).

Regarding claims 1, 2, 7, 8, 10 and 12:

Applicant has amended claims 1 to incorporate the feature “**the clock input is used to initiate charging and discharging of a capacitor**” of claim 4, which was indicated by the Office to be allowable if rewritten in independent form, and thus believes that amended independent claim 1 is allowable.

For at least the reason discussed above with respect to amended claim 1, Applicant also believes that amended independent claims 7 and 10 are allowable. Claims 2, 8 and 12 respectively depend on amended independent claims 1, 7 and 10, and thus are also believed to be allowable.

Regarding claims 15 and 16:

Applicant has amended claim 15 to incorporate the feature “**pre-distorting a quadrature amplitude modulation (QAM) signal included in the analog message signal to compensate non-linearity associated with the switching amplifier**”, which was originally recited in claim 19. The Office appears to indicate that Karki does not disclose this incorporated feature, but asserts that Darabi (Fig. 2, element 56, and col. 6, lines 47-67) discloses this incorporated feature. However, a close reading of the cited parts of Darabi reveals that Darabi does not disclose this incorporated feature either.

The following is taken from the portion of Darabi relied upon by the Office, with emphasis added:

“The controller 16 performs two functions. The first function provides for adaptive programming of the receiver 10, transmitter 14 and LO generator 16. By way of example, the transceiver can be programmed to handle various communication standards for local area networks (LAN) and personal area networks (PAN) including HomeRF, IEEE 802.11, Bluetooth, or any other wireless standard known in the art. This entails programming the transceiver to handle different modulation schemes and data rates. The described exemplary embodiment of the transceiver can support modulation schemes such as Binary Phase Shift Keying (BPSK), Quadrature Phase Shift Keying (QPSK), offset

quadrature phase shift keying (QPSK), Multiple frequency modulations such as M level frequency shift keying (FSK), Continuous Phase Frequency Shift Keying modulation (CFSK), Minimum Shift Keying modulation (MSK), Gaussian filtered FSK modulation (GFSK), and Gaussian filtered Minimum Shift Keying (GMSK), Phase/Amplitude modulation (such as **Quadrature Amplitude Modulation (QAM)**), orthogonal frequency modulation (such as **Orthogonal Frequency Division Multiplexing (OFDM)**), direct sequence spread spectrum systems, and frequency hopped spread spectrum systems and numerous other modulation schemes known in the art. Dynamic programming of the transceiver can also be used to provide optimal operation in the presence of noise and interference. By way of example, the IF can be programmed to avoid interference from an external source.” Darabi, col. 6, lines 47-67.

It can be seen from this excerpt that Darabi does not disclose in any way the feature “**pre-distorting a quadrature amplitude modulation (QAM) signal included in the analog message signal to compensate non-linearity associated with the switching amplifier**”, as incorporated into amended claim 15.

Also referring to Darabi, col. 10, lines 45-60, which explains Fig 2, element 56, it can be seen that element 56 of Fig. 2 is a low-pass filter. The Applicant cannot find any part of Darabi that teaches the function of Darabi’s element 56 in Figure 2 to be “**pre-distorting a quadrature amplitude modulation (QAM) signal included in the analog message signal to compensate non-linearity associated with the switching amplifier**”, as recited in amended claim 15. Applicant thus submits that Darabi does not disclose this incorporated feature of claim 15, and accordingly amended claim 15 is believed to be allowable.

Similarly, Applicant submits that Darabi does not disclose the feature “**pre-distorting the OFDM signal included in the analog message signal to compensate non-linearity associated with the switching amplifier**”, as recited in amended claim 16. Applicant thus submits that Darabi does not disclose this incorporated feature of claim 16, and accordingly believes amended claim 16 is allowable.

Therefore, Applicant respectfully requests the reconsideration of the rejection under 35 USC § 102(e), and allowance of claims 1, 2, 7, 8, 10, 12, 15 and 16.

§103 Rejection of the Claims

Claims 1, 3, 6, 7, 9-11, 13-15 and 17-20 were rejected under 35 USC § 103(a) as being unpatentable over Darabi et al. (U.S. 7,233,772, hereinafter “Darabi”). Claims 2, 8 and 16 were also rejected under 35 USC § 103(a) as being unpatentable over Darabi in view of O’Connor et al. (U.S. 6,693,271, hereinafter “O’Connor”). Claim 12 was also rejected under 35 USC § 103(a) as being unpatentable over Darabi in view of Karki. Claims 21 and 22 were also rejected under 35 USC § 103(a) as being unpatentable over Karki in view of Langberg (U.S. 5,852,630, hereinafter “Langberg”). Claims 21 and 22 were also rejected under 35 USC § 103(a) as being unpatentable over Darabi in view of Langberg. Claims 23 and 24 were also rejected under 35 USC § 103(a) as being unpatentable over Darabi.

The Examiner has the burden under 35 U.S.C. § 103 to establish a *prima facie* case of obviousness. *In re Fine*, 837 F.2d 1071, 1074 (Fed. Cir. 1988). To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. M.P.E.P. §2143.03 (citing *In re Royka*, 490 F.2d 981 (CCPA 1974)). “Mere identification in the prior art of each element is insufficient to defeat the patentability of the combined subject matter as a whole.” *In re Kahn*, 2006 WL 708687, \*9 (Fed. Cir. 2006).

Regarding independent claims 1, 7 and 10 and their dependent claims:

Applicant has amended claim 1 to incorporate the feature “**the clock input is used to initiate charging and discharging of a capacitor**” of claim 4, which was indicated by the Office to be allowable if rewritten in independent form, and thus believes that amended independent claim 1 is allowable. For at least the reason discussed above with respect to amended claim 1, Applicant believes that amended independent claims 7 and 10 are also allowable. Since independent claims 1, 7 and 10 are allowable, their dependent claims 2-3, 5-6, 8-9 and 11-14 are also allowable.

Regarding independent claims 15, 20, 21 and 24 and their dependent claims:

As mentioned above, Darabi does not disclose the feature “**pre-distorting a quadrature amplitude modulation (QAM) signal included in the analog message signal to compensate non-linearity associated with the switching amplifier**”, as incorporated in amended claim 15,

and no other references remedies this defect of Darabi. Thus, even combined, the cited references do not teach or suggest each and every feature of amended independent claim 15, and thus do not render amended independent claim 15 obvious. This argument also applies to amended independent claims 20, 21 and 24. Since the cited references do not render independent claims 15, 20, 21 and 24 obvious, the cited references do not render dependent claims 16-18 and 22 of these independent claims obvious either, because any claim depending from a nonobvious independent claim is also nonobvious. *See* M.P.E.P. § 2143.03.

Accordingly, Applicant respectfully requests the reconsideration of the rejections under 35 USC § 103(a), and allowance of claims 1-3, 5-18, 20-22, and 24.

#### Allowable Subject Matter

Claims 4 and 5 were objected to as being dependent upon a rejected base claim, but were indicated to be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Applicant has amended claim 1 to incorporate the feature of claim 4, which was indicated by the Office to be allowable if rewritten in independent form, and thus believes that amended claim 1 is allowable. Amended claim 5, which now depends on claim 1, is also allowable.

#### **RESERVATION OF RIGHTS**

In the interest of clarity and brevity, Applicant may not have addressed every assertion made in the Office Action. Applicant's silence regarding any such assertion does not constitute any admission or acquiescence. Applicant reserves all rights not exercised in connection with this response, such as the right to challenge or rebut any tacit or explicit characterization of any reference or of any of the present claims, the right to challenge or rebut any asserted factual or legal basis of any of the rejections, the right to swear behind any cited reference such as provided under 37 C.F.R. § 1.131 or otherwise, or the right to assert co-ownership of any cited reference. Applicant does not admit that any of the cited references or any other references of record are relevant to the present claims, or that they constitute prior art. To the extent that any rejection or assertion is based upon the Examiner's personal knowledge, rather than any objective evidence

of record as manifested by a cited prior art reference, Applicant timely objects to such reliance on Official Notice, and reserves all rights to request that the Examiner provide a reference or affidavit in support of such assertion, as required by MPEP § 2144.03. Applicant reserves all rights to pursue any cancelled claims in a subsequent patent application claiming the benefit of priority of the present patent application, and to request rejoinder of any withdrawn claim, as required by MPEP § 821.04.

### CONCLUSION

Applicant respectfully submits that the claims are in condition for allowance and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's attorney at (210) 308-5677 to facilitate prosecution of this application. If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

Respectfully submitted,

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